This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A method for alleviating chronic pain in a subject, the method comprising the steps of:

administering an effective amount of at least one inhibitor of neurotransmitter synthesis to a subject suffering from chronic pain at a peripheral nervous system inflammation site, wherein the at least one inhibitor of neurotransmitter synthesis is selected from the group consisting of ~~a glutamine synthetase inhibitor, a glutamate dehydrogenase inhibitor, a pyruvate carboxylase inhibitor,~~ **an inhibitor of glutamine synthetase enzyme activity, an inhibitor of glutamate dehydrogenase enzyme activity, an inhibitor of pyruvate carboxylase enzyme activity**, a glutamine cycle inhibitor, a glial cell tricarboxylic acid cycle inhibitor, and combinations thereof; and

wherein the administration of the effective amount of at least one inhibitor of neurotransmitter synthesis results in inhibition in synthesis of at least one neurotransmitter in the peripheral nervous

system of the subject at the peripheral nervous system inflammation site, thereby resulting in a reduction in glutamate stimulation of peripheral sensory nerve fibers, whereby a reduction in nociceptive responses at the peripheral nervous system inflammation site is observed without any resulting acute pain behavior.

2-3. (Canceled)

4. (Previously Presented) The method of claim 1, wherein the subject is a human.

5. (Previously Presented) The method of claim 1, wherein the step of administering an effective amount of at least one inhibitor of neurotransmitter synthesis to a subject suffering from chronic pain at a peripheral nervous system inflammation site is further defined as locally administering an effective amount of at least one inhibitor of neurotransmitter synthesis to a subject suffering from chronic pain at a peripheral nervous system inflammation site.

6. (Previously Presented) The method of claim 1, wherein the step of administering an effective amount of at least one inhibitor of neurotransmitter synthesis to a subject suffering from chronic pain at a peripheral nervous system inflammation site is further defined as injecting an effective amount of at least one inhibitor of neurotransmitter synthesis to a subject suffering from chronic pain at a peripheral nervous system inflammation site.

7. (Previously Presented) The method of claim 1, wherein the step of administering an effective amount of at least one inhibitor of neurotransmitter synthesis to a subject suffering from chronic pain at a peripheral nervous system inflammation site is further defined as topically applying an effective amount of at least one inhibitor of neurotransmitter synthesis to a subject suffering from chronic pain at a peripheral nervous system inflammation site.

8. (Previously Presented) The method of claim 1, wherein the step of administering an effective amount of at least one inhibitor of neurotransmitter synthesis to a subject suffering from chronic pain at a peripheral nervous system inflammation site is further defined as orally administering an effective amount of at least one inhibitor of neurotransmitter synthesis to a subject suffering from chronic pain at a peripheral nervous system inflammation site.

9. (Previously Presented) The method of claim 8, wherein the effective amount of at least one inhibitor of neurotransmitter synthesis is in the form of a prodrug.

10. (Previously Presented) The method of claim 8, wherein the effective amount of at least one inhibitor of neurotransmitter synthesis demonstrates substantially no penetration across the central nervous system blood brain barrier.

11. (Previously Presented) The method of claim 1, wherein the administration of the effective amount of at least one inhibitor of neurotransmitter synthesis results in a reduction in nociceptive responses at the peripheral nervous system inflammation site for at least two days without any resulting acute pain behavior.

12-18. (Canceled)

19. (Currently Amended) A method for alleviating acute and chronic pain in a subject, the method comprising the steps of:

administering an effective amount of at least one inhibitor of neurotransmitter synthesis to a subject suffering from acute and chronic pain at a peripheral nervous system inflammation site, wherein the at least one inhibitor of neurotransmitter synthesis is selected from the group consisting of ~~a glutamine synthetase inhibitor, a glutamate dehydrogenase inhibitor, a pyruvate carboxylase inhibitor,~~ **an inhibitor of glutamine synthetase enzyme activity, an inhibitor of glutamate dehydrogenase enzyme activity, an inhibitor of pyruvate carboxylase enzyme activity,** a glutamine cycle inhibitor, a glial cell tricarboxylic acid cycle inhibitor, and combinations thereof;

administering an effective amount of at least one compound having analgesic effects to the subject at the peripheral nervous system inflammation site; and

wherein the administration of the effective amount of at least one inhibitor of neurotransmitter synthesis results in inhibition of at least one neurotransmitter in the peripheral nervous system of the subject at the peripheral nervous system inflammation site, thereby resulting in a reduction in glutamate stimulation of peripheral sensory nerve fibers, and the administration of the effective

amount of at least one compound having analgesic effects results in a decrease in nociceptive responses at the peripheral nervous system inflammation site without any resulting acute pain behavior.

20-21. (Canceled)

22. (Original) The method of claim 19 wherein, in the step of administering an effective amount of at least one compound having analgesic effects, the at least one compound having analgesic effects is a glutamate antagonist or an inhibitor of glutamate binding to glutamate receptors on peripheral sensory nerves.

23. (Previously Presented) The method of claim 19, wherein the administration of the effective amount of at least one inhibitor of neurotransmitter synthesis and the administration of the effective amount of at least one compound having analgesic effects results in a decrease in nociceptive responses at the peripheral nervous system inflammation site that last for a period of at least two days without any resulting acute pain behavior.

24. (Newly Added) The method of claim 1 wherein, in the step of administering an effective amount of at least one inhibitor of neurotransmitter synthesis, the at least one inhibitor of neurotransmitter synthesis is an inhibitor of glutamine synthetase enzyme activity selected from the group consisting of methionine-S-sulfoximine (MSO), phosphinothricin (PPT), 4-N-hydroxy-L-2,4-diaminobutyric acid (NH-DABA), Delta-hydroxylysine, and combinations thereof.

25. (Newly Added) The method of claim 1 wherein, in the step of administering an effective amount of at least one inhibitor of neurotransmitter synthesis, the at least one inhibitor of neurotransmitter synthesis is an inhibitor of glutamate dehydrogenase enzyme activity selected from the group consisting of bromofuroate, Palmitoyl-Coenzyme-A (Palmitoyl-Co-A), orthovanadate, vanadyl sulphate, vanadyl acetylacetonate, glutarate, 2-oxoglutarate (α-ketoglutarate), estrogen, estrogen analogues, pyridine-2,6-dicarboxylic acid, and combinations thereof.

26. (Newly Added) The method of claim 1 wherein, in the step of administering an effective amount of at least one inhibitor of neurotransmitter synthesis, the at least one inhibitor of neurotransmitter synthesis is an inhibitor of pyruvate carboxylase enzyme activity selected from the group consisting of

phenyl acetic acid (PAA), phenylacetyl Coenzyme-A, phenylacetyl Co-A ester, oxamate, and combinations thereof.

27. (Newly Added) The method of claim 1 wherein, in the step of administering an effective amount of at least one inhibitor of neurotransmitter synthesis, the at least one inhibitor of neurotransmitter synthesis is a glial cell tricarboxylic acid cycle inhibitor selected from the group consisting of fluoroacetate, fluorocitrate, and combinations thereof.

28. (Newly Added) The method of claim 19 wherein, in the step of administering an effective amount of at least one inhibitor of neurotransmitter synthesis, the at least one inhibitor of neurotransmitter synthesis is an inhibitor of glutamine synthetase enzyme activity selected from the group consisting of methionine-S-sulfoximine (MSO), phosphinothricin (PPT), 4-N-hydroxy-L-2,4-diaminobutyric acid (NH-DABA), Delta-hydroxylysine, and combinations thereof.

29. (Newly Added) The method of claim 19 wherein, in the step of administering an effective amount of at least one inhibitor of neurotransmitter synthesis, the at least one inhibitor of neurotransmitter synthesis is an inhibitor of glutamate dehydrogenase enzyme activity selected from the group consisting

of bromofuroate, Palmitoyl-Coenzyme-A (Palmitoyl-Co-A), orthovanadate, vanadyl sulphate, vanadyl acetylacetonate, glutarate, 2-oxoglutarate (α-ketoglutarate), estrogen, estrogen analogues, pyridine-2,6-dicarboxylic acid, and combinations thereof.

30. (Newly Added) The method of claim 19 wherein, in the step of administering an effective amount of at least one inhibitor of neurotransmitter synthesis, the at least one inhibitor of neurotransmitter synthesis is an inhibitor of pyruvate carboxylase enzyme activity selected from the group consisting of phenyl acetic acid (PAA), phenylacetyl Coenzyme-A, phenylacetyl Co-A ester, oxamate, and combinations thereof.

31. (Newly Added) The method of claim 19 wherein, in the step of administering an effective amount of at least one inhibitor of neurotransmitter synthesis, the at least one inhibitor of neurotransmitter synthesis is a glial cell tricarboxylic acid cycle inhibitor selected from the group consisting of fluoroacetate, fluorocitrate, and combinations thereof.